

Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed July 25, 2007.

I. Summary of Examiner's Rejections

Prior to the Office Action mailed July 25, 2007, Claims 1-59 were pending in the Application. In the Office Action, Claims 41-50 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Claim 40 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 41-50 were rejected under 35 U.S.C. § 102(e) as being anticipated by Gans et al. (U.S. Patent No. 6,216,127, hereinafter Gans). Claims 1-40 and 51-53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gans in view of Langseth et al. (U.S. Patent No. 6,671,715).

II. Summary of Applicants Amendment

The present Response amends Claims 1, 2, 7-9, 11, 15-18, 20-23, 25-32, 34-38 and 51, cancels Claims 39-50, and adds new Claims 60-69, leaving for the Examiner's present consideration Claims 1-38 and 51-69. Reconsideration of the Application, as amended, is respectfully requested. Applicants respectfully reserve the right to prosecute any originally presented or canceled claims in a continuing or future application.

III. Claim Rejections under 35 U.S.C. § 112

In the Office Action mailed July 25, 2007, Claims 41-50 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. More particularly, Claims 41-50 were rejected as being "single means claims" where a recitation does not appear in combination with another recited element of means.

The present Response hereby cancels Claims 41-50, thereby rendering moot and rejections as to these claims. Reconsideration of the Application as amended is respectfully requested.

IV. Claim Rejections under 35 U.S.C. § 101

In the Office Action mailed July 25, 2007, Claim 40 was rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

The present Response hereby cancels Claim 40, rendering moot any rejection as to this claim. Applicants respectfully reserve the right to prosecute any canceled or originally presented claims in a continuing or future application. Reconsideration of the application is respectfully requested.

V. Claim Rejections under 35 U.S.C. § 102(e)

In the Office Action mailed July 25, 2007, Claims 41-50 were rejected under 35 U.S.C. § 102(e) as being anticipated by Gans et al. (U.S. Patent No. 6,216,127, hereinafter Gans). The present Response hereby cancels Claims 41-50, thereby rendering moot any rejection as to these claims. Reconsideration of the application as amended is respectfully requested.

VI. Claim Rejections under 35 U.S.C. § 103(a)

In the Office Action mailed July 25, 2007, Claims 1-40 and 51-53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gans in view of Langseth et al. (U.S. Patent No. 6,671,715, hereinafter Langseth).

Claim 1

Claim 1 has been amended to more clearly define the embodiment therein. As amended, Claim 1 defines:

1. *A method for governing the delivery rate of electronic mail (email) messages, said method comprising:
identifying one or more email messages to be delivered to a plurality of recipients;
maintaining a plurality of mail transfer agents (MTAs) that are capable of delivering the email messages simultaneously;
initiating delivery of the email messages to the plurality of recipients by allocating the email messages among the plurality of MTAs;
monitoring delivery efficiency of said email messages based on the performance of the plurality of MTAs during delivery of the email messages;
determining a target delivery rate for said email messages; and
controlling the rate of the email delivery based on the delivery efficiency and the target delivery rate of said MTAs by increasing a number of MTAs that are allocated for delivering the email messages when the delivery efficiency of the email messages is below the target delivery rate and*

decreasing the number of MTAs that are allocated for delivering the email messages when the delivery efficiency is above the target delivery rate.

As amended, Claim 1 defines a method for governing the delivery rate of email messages. The delivery is initiated by allocating a set of email messages among a plurality of MTAs (mail transfer agents). The delivery efficiency of the email messages is monitored based on the performance of these MTAs. Based on this performance efficiency, the rate of email delivery is controlled. For example, when the delivery efficiency is below the target rate, the number of MTAs is increased to raise the number of emails being transmitted per time. Similarly, when the delivery efficiency is above the target rate, the number of reserved MTAs can be decreased.

The advantages of this functionality include the ability to have an email governor which can increase or decrease the rate of email transmission depending on the server's efficiency in delivering that email. For example, when the servers are busy handling large amounts of traffic, this information would be reflected in the delivery efficiency being monitored and, accordingly, the number of MTAs is automatically increased to maintain the message delivery rate above the target rate. On the other hand, when the servers are mostly idle, the rate efficiency may be high and accordingly, the number of MTAs can be decreased and still handle the transmissions within the target rate.

Gans teaches a method and apparatus for processing electronic mail in parallel. More specifically, Gans describes a guardian process which can initiate, restart or stop processes. This guardian retains and compares snapshots of currently executing processes so that it can add or remove processes according to the proper number of processes that are configured to be executing (col. 8, lines 28-37).

Langseth teaches a system and method for automatic real-time delivery of personalized informational and transactional data to users via high throughput content delivery device. More specifically, Langseth describes multiple data distribution servers which are assigned to handle about the same number of jobs ("each data distribution server is constantly working on a job and the work is shared equally among all the servers." Col. 16, lines 57-59).

However, Applicants respectfully submit, that Gans in combination with Langseth fail to disclose the features of claim 1, as amended.

First, Gans and Langseth fail to disclose *monitoring the delivery efficiency of said email messages based on the performance of the plurality of MTAs during delivery of the email messages*, as defined in amended Claim 1. For example, the message delivery rate of each server that the server delivers over time can be monitored (e.g. claim 2, par. [0065]). Claim 1 can monitor this type of information among the plurality of MTAs. Neither of the cited reference discloses such a feature.

In Gans, the guardian process can retain a snapshot of currently running processes and can obtain a new snapshot. Based on comparing the two snapshots and configuration information, the guardian can start or terminate various processes. However, this is not the same as monitoring the delivery efficiency of email messages based on the performance of MTAs during message delivery, as defined in amended Claim 1. The guardian described in Gans merely uses snapshots in order to see which processes are currently running and based on configuration information the guardian determine whether to restart/terminate certain processes. The configuration information is supplied by a system administrator (col. 8, lines 20-23). Thus, the guardian effectively keeps the number of running processes in check and in accordance with the system configuration information. However, Gans does not mention monitoring the delivery efficiency of any MTAs based on their performance in delivering email, as defined in amended Claim 1. For example, Gans does not keep track of the number of email messages delivered by each MTA over a period of time (e.g. claim 2).

Similarly, in Langseth, a load balancing feature is described, where jobs are split up amongst multiple data distribution servers (col. 16, lines 33 – col. 17, line 15). In addition, fault tolerance and scalability is also provided by the distributed data distribution system. However Langseth also fails to mention monitoring any delivery efficiency of remote MTAs based on their performance, as defined in amended Claim 1.

Second, and more specifically, Gans and Langseth fail to disclose *controlling the rate of the email delivery based on the delivery efficiency and the target delivery rate of said MTAs by increasing a number of MTAs that are allocated for delivering the email messages when the delivery efficiency of the email messages is below the target delivery rate and decreasing the number of MTAs that are allocated for delivering the email messages when the delivery efficiency is above the target delivery rate*, as defined in amended Claim 1. Neither reference increases the number of MTAs when the efficiency rate falls below a target rate. Similarly,

neither references discloses decreasing the number of MTAs when the efficiency rate increases above the target rate.

In Gans, the guardian process can initiate and terminate processes once it verifies the proper number of each process type. However, Gans does not increase/decrease the MTAs according to the delivery efficiency rate which is continuously being monitored, as defined in amended Claim 1. Therefore, while Gans may add or remove processes in order to bring the system up to a configured number of executing processes, it does not do so according to monitoring any delivery efficiencies of the remote MTAs, as defined in Claim 1. More importantly, Gans completely fails to mention increasing the number of MTAs when the efficiency falls below the target rate and decreasing it when the efficiency is above the target rate.

In the Office Action, it was agreed that Gans does not disclose controlling the rate of email delivery based on delivery efficiency and a target delivery rate wherein the delivery efficiency is based on the performance of the plurality of MTAs (Office Action, page 4). It was proposed that Langseth discloses this feature on column 16, line 33 – column 17, line 6. Applicants respectfully disagree. The cited portions are merely describing load balancing various jobs among multiple data distribution servers. There is no disclosure of increasing the number of MTAs when the delivery efficiency is below a target rate, nor decreasing the number of MTAs when the delivery efficiency is above the target rate, as defined in amended Claim 1. This is not surprising since neither reference monitors the delivery efficiency of the multiple MTAs to begin with.

In view of the above comments, Applicants respectfully submit that Claim 1, as amended, is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claim 51

Claim 51 has been amended to more clearly define the embodiment therein. As amended, Claim 51 defines:

*51. A method for governing the delivery rate of electronic mail (email) messages, said method comprising:
identifying one or more email messages to be delivered to a plurality of recipients;*

maintaining a plurality of mail transfer agents (MTAs) that are capable of delivering the email messages simultaneously;
initiating delivery of the email messages to the plurality of recipients by allocating the email messages among the plurality of MTAs;
maintaining an email message retry limit;
detecting failure of the delivery to one or more of the plurality of recipients;
repeating delivery attempts based on the email message retry limit; and
automatically adjusting a email message retry limit for the plurality of MTAs to reduce delivery failure rate of said email messages by reducing resources spent on the recipients for which delivery attempts have failed.

As amended Claim 51 defines automatically adjusting the email message retry limit for the plurality of MTAs in order to reduce delivery failure rate. This is performed by reducing resources spent on the recipients for which delivery attempts have failed. This can be advantageous because those resources can be freed up and used for recipients for which the likelihood of delivery is more probable.

In the Office Action, Langseth was cited as disclosing this feature of Claim 51 on column 19, lines 42-47. Applicants respectfully disagree. The cited portions of Langseth describe a system that retries sending the message to a recipient a number of times and then places “the message in a BadMail folder where it stays for human intervention” (col. 19, line 48). However, there is no disclosure of automatically adjusting the actual retry limit in order to reduce the delivery failure rate. In Claim 51 embodiment, the email governor automatically adjusts the retry limits in order to reduce delivery failures. In Gans, on the other hand, the retry limit is not manipulated, there is no disclosure of automatically adjusting the retry limit.

Accordingly, Applicants respectfully submit that Claim 51, as amended, is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 11, 20 and 30

Claims 11, 20 and 30, while independently patentable, recite limitations that, similarly to those described above with respect to Claim 1, are not taught, suggested nor otherwise rendered obvious by the cited references. Reconsideration thereof is respectfully requested.

Claims 2-10, 12-19, 21-29, 31-38 and 52-59

Claims 2-10, 12-19, 21-29, 31-38 and 52-59 are not addressed separately, but it is respectfully submitted that these claims are allowable as depending from an allowable independent claim, and further in view of the comments provided above. Applicants respectfully submit that Claims 2-10, 12-19, 21-29, 31-38 and 52-59 are similarly neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

It is also submitted that these claims also add their own limitations which render them patentable in their own right. Applicants respectfully reserve the right to argue these limitations should it become necessary in the future.

VII. Additional Amendments

The present Response hereby adds new Claims 60-69. Applicants respectfully submit that new Claims 60-69 are not anticipated, nor rendered obvious by the cited references of record and consideration thereof is respectfully requested.

VIII. Conclusion

In view of the above amendments and remarks, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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